ENTERED 1645

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/955,502

DATE: 03/27/2002
TIME: 13:54:23

Input Set : A:\Uw975591.app
Output Set: N:\CRF3\03272002\I955502.raw

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TECH CENTER 1600/2900

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 3 <110> APPLICANT: Downs, Diana M.
 4        Gralnick, Jeff A.
 6 <120> TITLE OF INVENTION: Method for Preventing Superoxide Damage to Cells and
 7        Oxygen-Labile Proteins
 9 <130> FILE REFERENCE: 960296.97559
11 <140> CURRENT APPLICATION NUMBER: 09/955,502
12 <141> CURRENT FILING DATE: 2001-09-18
14 <150> PRIOR APPLICATION NUMBER: 60/234,588
15 <151> PRIOR FILING DATE: 2000-09-22
17 <160> NUMBER OF SEQ ID NOS: 33
19 <170> SOFTWARE: PatentIn Ver. 2.1
21 <210> SEQ ID NO: 1
22 <211> LENGTH: 65
23 <212> TYPE: PRT
24 <213> ORGANISM: Artificial Sequence
26 <220> FEATURE:
27 <223> OTHER INFORMATION: Description of Artificial Sequence:YggX consensus
28        sequence
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32 <222> LOCATION: (2)
33 <223> OTHER INFORMATION: can be any amino acid
35 <220> FEATURE:
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37 <222> LOCATION: (4)..(6)
38 <223> OTHER INFORMATION: can be any amino acid
40 <220> FEATURE:
41 <221> NAME/KEY: UNSURE
42 <222> LOCATION: (8)..(22)
43 <223> OTHER INFORMATION: can be any amino acid
45 <220> FEATURE:
46 <221> NAME/KEY: UNSURE
47 <222> LOCATION: (24)..(26)
48 <223> OTHER INFORMATION: can be any amino acid
50 <220> FEATURE:
51 <221> NAME/KEY: UNSURE
52 <222> LOCATION: (28)..(38)
53 <223> OTHER INFORMATION: can be any amino acid
55 <220> FEATURE:
56 <221> NAME/KEY: UNSURE
57 <222> LOCATION: (40)..(41)
58 <223> OTHER INFORMATION: can be any amino acid
60 <220> FEATURE:
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 62 <222> LOCATION: (43)..(45)
 63 <223> OTHER INFORMATION: can be any amino acid
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 67 <222> LOCATION: (48)
 68 <223> OTHER INFORMATION: can be any amino acid
 70 <220> FEATURE:
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 72 <222> LOCATION: (50)
 73 <223> OTHER INFORMATION: can be any amino acid
 75 <220> FEATURE:
 76 <221> NAME/KEY: UNSURE
 77 <222> LOCATION: (53)..(54)
 78 <223> OTHER INFORMATION: can be any amino acid
 80 <220> FEATURE:
 81 <221> NAME/KEY: UNSURE
 82 <222> LOCATION: (56)..(62)
 83 <223> OTHER INFORMATION: can be any amino acid
 85 <220> FEATURE:
 86 <221> NAME/KEY: UNSURE
 87 <222> LOCATION: (64)..(65)
 88 <223> OTHER INFORMATION: can be any amino acid
 90 <400> SEQUENCE: 1
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     92 1               5                   10                  15
W--> 94 Xaa Xaa Xaa Xaa Xaa Xaa Pro Xaa Xaa Xaa Gly Xaa Xaa Xaa Xaa Xaa
     95              20                  25                  30
W--> 97 Xaa Xaa Xaa Xaa Xaa Xaa Trp Xaa Xaa Trp Xaa Xaa Xaa Gln Thr Xaa
     98              35                  40                  45
W--> 100 Leu Xaa Asn Glu Xaa Xaa Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Arg Xaa
     101         50                  55                  60
W--> 103 Xaa
     104 65
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108 <211> LENGTH: 87
109 <212> TYPE: PRT
110 <213> ORGANISM: Bordetella pertussis
112 <400> SEQUENCE: 2
113 Met Ser Arg Ile Val Asn Cys Val Lys Leu Lys Arg Glu Ala Glu Gly
114 1               5                   10                  15
116 Leu Asp Phe Pro Pro Tyr Pro Gly Glu Leu Gly Thr Arg Ile Trp Gln
117              20                  25                  30
119 Gln Ile Ser Lys Glu Ala Trp Glu Glu Trp Lys Gln Ile Gln Thr Arg
120              35                  40                  45
122 Leu Val Asn Glu Asn Arg Leu Asn Leu Ala Asp Ala Arg Ala Arg Lys
123          50                  55                  60
125 Tyr Leu Gln Gln Gln Met Glu Arg Phe Leu Phe Glu Asp Gly Thr Val
126 65                  70                  75                  80
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128 Glu Ala Gln Gly Tyr Val Pro
129                   85
132 <210> SEQ ID NO: 3
133 <211> LENGTH: 87
134 <212> TYPE: PRT
135 <213> ORGANISM: Bordetella parapertussis
137 <400> SEQUENCE: 3
138 Met Ser Arg Ile Val Asn Cys Val Lys Leu Lys Arg Glu Ala Glu Gly
139  1               5                   10                  15
141 Leu Asp Phe Pro Pro Tyr Pro Gly Glu Leu Gly Thr Arg Ile Trp Gln
142              20                  25                  30
144 Gln Ile Ser Lys Glu Ala Trp Glu Glu Trp Lys Gln Ile Gln Thr Arg
145          35                  40                  45
147 Leu Val Asn Glu Asn Arg Leu Asn Leu Ala Asp Ala Arg Ala Arg Lys
148      50                  55                  60
150 Tyr Leu Gln Gln Gln Met Glu Arg Phe Leu Phe Glu Asp Gly Thr Val
151  65                  70                  75                  80
153 Glu Ala Gln Gly Tyr Val Pro
154                   85
157 <210> SEQ ID NO: 4
158 <211> LENGTH: 86
159 <212> TYPE: PRT
160 <213> ORGANISM: Bordetella bronchiseptica
162 <400> SEQUENCE: 4
163 Met Ser Arg Ile Val Asn Cys Val Lys Leu Lys Arg Glu Ala Glu Gly
164  1               5                   10                  15
166 Leu Asp Phe Pro Pro Tyr Pro Gly Glu Leu Gly Thr Arg Ile Trp Gln
167              20                  25                  30
169 Gln Ile Ser Lys Glu Ala Trp Glu Glu Trp Lys Gln Ile Gln Thr Arg
170          35                  40                  45
172 Leu Val Asn Glu Asn Arg Leu Asn Leu Ala Asp Ala Arg Ala Arg Lys
173      50                  55                  60
175 Tyr Leu Gln Gln Gln Met Glu Arg Phe Leu Phe Glu Asp Gly Thr Val
176  65                  70                  75                  80
178 Glu Ala Gln Gly Val Pro
179                   85
182 <210> SEQ ID NO: 5
183 <211> LENGTH: 91
184 <212> TYPE: PRT
185 <213> ORGANISM: Actinobacillus actinomycetemcomitans
187 <400> SEQUENCE: 5
188 Met Ala Arg Met Val Phe Cys Glu Arg Leu Lys Gln Glu Ala Glu Gly
189  1               5                   10                  15
191 Leu Asp Phe Gln Leu Tyr Pro Gly Glu Leu Gly Lys Arg Ile Phe Asp
192              20                  25                  30
194 Ser Ile Ser Lys Gln Ala Trp Gly Glu Trp Met Lys Lys Gln Thr Met
195          35                  40                  45
197 Leu Val Asn Glu Lys Lys Leu Asn Met Met Asn Ala Glu His Arg Lys
198      50                  55                  60
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Input Set : A:\Uw975591.app
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203 His Ile Glu Gly Tyr Thr Pro Pro Glu Ala Lys
204                 85                  90
207 <210> SEQ ID NO: 6
208 <211> LENGTH: 87
209 <212> TYPE: PRT
210 <213> ORGANISM: Pasteurella multocida
212 <400> SEQUENCE: 6
213 Met Ala Arg Thr Val Phe Cys Glu Tyr Leu Lys Gln Glu Ser Glu Gly
214  1               5                  10                  15
216 Leu Asp Phe Gln Leu Tyr Pro Gly Glu Leu Gly Lys Arg Ile Phe Asp
217                 20                  25                  30
219 Ser Ile Ser Lys Gln Ala Trp Arg Glu Trp Met Lys Lys Gln Thr Met
220             35                  40                  45
222 Leu Val Asn Glu Lys Lys Leu Asn Met Met Asn Ala Asp His Arg Gln
223      50                  55                  60
225 Leu Leu Glu Gln Glu Met Val Asn Phe Leu Phe Glu Gly Lys Asp Val
226  65                  70                  75                  80
228 His Ile Glu Gly Tyr Val Pro
229                 85
232 <210> SEQ ID NO: 7
233 <211> LENGTH: 87
234 <212> TYPE: PRT
235 <213> ORGANISM: Haemophilus influenzae
237 <400> SEQUENCE: 7
238 Met Ala Arg Thr Val Phe Cys Glu Tyr Leu Lys Lys Glu Ala Glu Gly
239  1               5                  10                  15
241 Leu Asp Phe Gln Leu Tyr Pro Gly Glu Leu Gly Lys Arg Ile Phe Asp
242                 20                  25                  30
244 Ser Val Ser Lys Gln Ala Trp Gly Glu Trp Ile Lys Lys Gln Thr Met
245             35                  40                  45
247 Leu Val Asn Glu Lys Lys Leu Asn Met Met Asn Ala Glu His Arg Lys
248      50                  55                  60
250 Leu Leu Glu Gln Glu Met Val Asn Phe Leu Phe Glu Gly Lys Asp Val
251  65                  70                  75                  80
253 His Ile Glu Gly Tyr Val Pro
254                 85
257 <210> SEQ ID NO: 8
258 <211> LENGTH: 87
259 <212> TYPE: PRT
260 <213> ORGANISM: Haemophilus ducreyi
262 <400> SEQUENCE: 8
263 Met Ala Arg Met Val Phe Cys Glu Tyr Leu Lys Lys Glu Ala Glu Gly
264  1               5                  10                  15
266 Leu Asp Phe Gln Leu Tyr Pro Gly Glu Leu Gly Lys Arg Ile Phe Asn
267                 20                  25                  30
269 Ser Ile Ser Lys Gln Ala Trp Ala Glu Trp Ile Lys Lys Gln Thr Met
270             35                  40                  45
```

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Input Set : A:\Uw975591.app
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```
272 Leu Val Asn Glu Lys Lys Leu Asn Met Met Asn Pro Glu His Arg Gln
273      50              55               60
275 Leu Leu Glu Ala Glu Met Val Asn Phe Leu Phe Glu Gly Lys Asp Val
276  65              70               75                   80
278 His Ile Asp Gly Tyr Val Pro
279                  85
282 <210> SEQ ID NO: 9
283 <211> LENGTH: 88
284 <212> TYPE: PRT
285 <213> ORGANISM: Shewanella putrefasciens
287 <400> SEQUENCE: 9
288 Met Ala Arg Thr Val Asn Cys Val His Leu Asn Lys Glu Ala Asp Gly
289  1               5               10                  15
291 Leu Asp Phe Gln Leu Tyr Pro Gly Asp Leu Gly Lys Arg Ile Phe Asp
292              20               25                   30
294 Asn Ile Ser Lys Glu Ala Trp Gly Leu Trp Gln Lys Lys Gln Thr Met
295          35               40               45
297 Leu Ile Asn Glu Lys Lys Leu Asn Met Met Asn Val Asp Asp Arg Lys
298      50              55               60
300 Phe Leu Glu Ala Gln Met Thr Ser Phe Leu Phe Glu Gly Lys Asp Val
301  65              70               75                   80
303 Glu Ile Glu Gly Phe Val Pro Glu
304                  85
307 <210> SEQ ID NO: 10
308 <211> LENGTH: 90
309 <212> TYPE: PRT
310 <213> ORGANISM: Vibrio cholerae
312 <400> SEQUENCE: 10
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314  1               5               10                  15
316 Leu Asp Phe Gln Leu Tyr Pro Gly Glu Leu Gly Lys Arg Ile Phe Asp
317              20               25                   30
319 Asn Ile Cys Lys Glu Ala Trp Ala Gln Trp Gln Thr Lys Gln Thr Met
320          35               40               45
322 Leu Ile Asn Glu Lys Lys Leu Asn Met Met Asp Pro Glu His Arg Lys
323      50              55               60
325 Leu Leu Glu Gln Glu Met Val Asn Phe Leu Phe Glu Gly Lys Glu Val
326  65              70               75                   80
328 His Ile Glu Gly Tyr Thr Pro Pro Ala Lys
329                  85               90
332 <210> SEQ ID NO: 11
333 <211> LENGTH: 91
334 <212> TYPE: PRT
335 <213> ORGANISM: Escherichia coli K-12 MG1655
337 <400> SEQUENCE: 11
338 Met Ser Arg Thr Ile Phe Cys Thr Phe Leu Gln Arg Glu Ala Glu Gly
339  1               5               10                  15
341 Gln Asp Phe Gln Leu Tyr Pro Gly Glu Leu Gly Lys Arg Ile Tyr Asn
342              20               25                   30
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RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 03/27/2002
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Input Set : **A:\Uw975591.app**
Output Set: **N:\CRF3\03272002\I955502.raw**

<u>Please Note:</u>
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:1; Xaa Pos. 2,4,5,6,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,24,25
Seq#:1; Xaa Pos. 26,28,29,30,31,32,33,34,35,36,37,38,40,41,43,44,45,48,50
Seq#:1; Xaa Pos. 53,54,56,57,58,59,60,61,62,64,65

VERIFICATION SUMMARY   DATE: 03/27/2002
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Input Set : A:\Uw975591.app
Output Set: N:\CRF3\03272002\I955502.raw

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L:91 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:0
L:94 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:16
L:97 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:32
L:100 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:48
L:103 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:64
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